

**Notice of Allowability**

Application No.

10/808,282

Examiner

Paul A. Zucker

Applicant(s)

PETZOLDT ET AL.

Art Unit

1621

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

PAUL A. ZUCKER, PH.D.  
PRIMARY EXAMINER

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 3/25/2004, 8/5/2004, 10/13/2004, 12/16/2004

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The following is an examiner's statement of reasons for allowance: The instantly claimed process for partially oxidizing acrolein to acrylic acid is neither disclosed nor fairly suggested by the closest prior art: Arnold et al (US 6,395,936-B1 05-2002) and Unverricht et al (WO 00/53559 09-2000 corresponding to US 6,403,829-B1 06-2002) either alone or in combination. Arnold and Unverricht represent the closest prior art that, together, teach the overall transformation of propene into acrylic acid.

Arnold teaches (Column 5, lines 11-62) a process, for the catalytic gas-phase oxidation of propene into acrolein using a multimetal oxide catalyst containing the elements Mo, Bi and Fe. Arnold teaches (Column 3, line 61-column 4, line 8; and Column 15, lines 27-57) the use of two successive temperature zones A and B in which the process flows in the direction A→B and the temperature in zone B is at least 10°C and up to 50°C higher than that in A. Thus the process of Arnold, representing the first half of the instantly claimed process, is distinguished from the instantly claimed process by the direction of the temperature gradient which in the instant case is either unchanged or decreases in the direction A→B.

Unverricht (6,403,829, Abstract) teaches a process for the gas phase oxidation of acrolein to acrylic acid similar to that instantly claimed in the second half of the inventive process. Unverricht (*ibid*) teaches passage through a fixed bed catalyst which is housed in two spatially successive reaction zones A and B where the

reaction zone B is kept at higher temperature than reaction zone A. Unverricht, however, neither discloses nor fairly suggests that the oxidation be performed over a fixed catalyst bed having at least two fixed catalyst bed zones and accommodated in two successive temperature zones A, B, wherein the zone A temperature is equal to or lower than the zone B temperature and the transition from temperature in zone A to the temperature in zone B does not coincide with the transition from one fixed catalyst bed zone to another fixed catalyst bed zone.

The instantly claimed process is therefore patentable over the teachings of Arnold and Unverricht, taken either alone or in combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

2. All Post-Allowance correspondence concerning this application must be mailed to the following address: BOX ISSUE FEE, COMMISSIONER FOR PATENTS, WASHINGTON, DC 20231 or fax them to The Office of Patent Publications at 703-308-5083 in order to expedite the handling of such correspondence (amendments under 37 CFR 1.132; information disclosure statements, formal drawings, etc.) Sending Post-Allowance papers to the technology center will only cause delays in matching papers with the case.

### ***Contact Information***

**For information concerning:**

- Status of correspondence sent after receipt of the Notice of Allowance
  - ◆ **Contact – Correspondence Branch at 703-305-8027**
- Notices of Abandonment for failure to pay the Issue Fee or Failure to submit formal drawings Contact – 703-305-5358/5340 or by fax 703-305-8755
- Issue Fees that have not been paid for at LEAST 3 months, but no issue notification has been received Contact – 703-305-8263
- Non-receipt of the Letters Patent Contact – 703-305-8263
- Status of application after the Issue Fee has been paid
- Status of Issue Fee payments or status of receipt of Issue Fees
- Status of allowed applications after receipt of drawings or fees
- Status of receipt of formal drawings after allowance
- ◆ **Contact – Customer Service at 888-786-0101 or 703-308-6789 or 703-305-8497 or 703-305-8495 or 703-308-6790 or by fax at 703-308-5065**

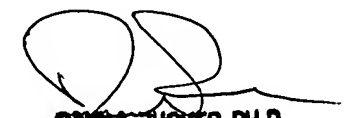
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 571-272-0650. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1621

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**PAULA ZUCKER, PH.D.**  
**PRIMARY EXAMINER**  
*tel call 1621*